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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/508,422	03/13/2000	RUDOLF RITTER	PM257741	9767

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EXAMINER
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CHARLES, DEBRA F

ART UNIT	PAPER NUMBER
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3624

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/508,422		RITTER ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Debra F. Charles		3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 23-40 and 42-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-40 and 42-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*SM*

*158*

### **Response to Arguments**

1. Applicant's arguments with respect to claims 23-40, and 42-60 have been considered and the final office action sent out previously has been reversed and new references has been added to address the attorney's concern about claim 23 and the Slusky reference.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 23,24,25,26,27,28,29,30, 31,32,33,34, 35,36,37, 38,39,40,42, 43, 44,45,46, 47, 48, 50, 51, 59 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fenner(5561706A), Castro (5359642A), Slusky (5440620A), Lakshmi et al.(6108648A) and Jain et al. (5490203A).

Re Claims 23, 31, and 43: Fenner disclose a billing system for determining telecommunications network usage fees(col. 4, lines 40-50), comprising:

a first profile memory area configured to store a dynamic client profile for at least one customer of the telecommunications network(col. 4, lines 1-45).

Fenner disclose(s) the claimed invention except a pre-paid amount memory area configured to store a pre-paid money amount associated with the customer; and means for debiting said usage fee from the pre-paid money amount. However, in Abstract, Fig. 3, item 45, 46, 52 and 53, col. 2, lines 45-col. 4, line 25 thereof, Castro disclose(s) prepaid subscriber phone service with various memories and deducting funds from the prepaid area. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner based on the teachings of Castro. The motivation to combine these references is to make the money collection system fast and efficient and effective when used with a IC card. IC cards already have memories in them and adding the debit function enables real-time accounting of remaining funds.

Fenner and Castro disclose(s) the claimed invention except said dynamic client profile indicating an average cost of previous connections of the customer and being derived from at least one random variable of the previous connections; .  
means for determining the at least one random variable with every new connection;  
means for changing the dynamic client profile depending on the determined at least one random variable; means for determining a usage fee based on the stored dynamic client profile.

However, in Abstract, col. 2, lines 1-col. 3, line 67, col. 10, lines 45-65 thereof Lakshmi et al. disclose a neural network that dynamically changes the output based on randomly generated new parameters introduced to it based on cost per call value of functions associated with user-defined datatypes. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner and Castro based on the teachings of Lakshmi et al. The motivation to combine these references is to make the output of the billing system accurately predict the amounts and costs based on interactively input data. It would be obvious to use such a system to accurately predict estimated billed cost of the connection based on input parameters. Further, Jain et al. discloses average cost (col. 11, lines 60-67) within a wireless system and it would be obvious to incorporate average cost of previous calls as a parameter to estimate or predict forecasted cost.

Re Claims 24 and 32: Fenner disclose comprising a second profile memory area configured to store an overall client profile, wherein the usage fee is determined from the overall client profile, and wherein the overall client profile is derived from at least one random variable of previous connections of at least one group of customers, the stored overall client profile being adapted dynamically (Abstract, i.e. maintain a plurality of service profiles, col. 4, lines 40-65).

Re Claim 25: Fenner and Castro disclose the claimed invention except the at least one random variable includes at least one of customer duration, time of day, day of the week, and geographic characteristics of the previous connection. However, in the

Abstract, col. 1, lines 1-67, thereof, Slusky discloses dynamic profile with various parameters inserted into the profile. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner, and Castro based on the teachings of Slusky. The motivation to combine these references is to make the output of the billing system accurately predict the amounts and costs based on interactively input data. Further, interactive, real-time predictive systems are old and well-known in the economics industry. It would be obvious to use such a system to accurately predict estimated billed cost of the connection based on input parameters.

Re Claim 26: Fenner disclose the usage fee is determined based on a statistical system load obtained from the overall client profile(col. 4, lines 40-60).

Re Claims 27 and 33: Fenner and Castro disclose(s) the claimed invention except dynamic client profile indicating an average cost of previous connections of the customer and being derived from at least one statistical characteristic of the previous connections of the customer means for determining at least one statistical characteristic with every new connection, means for changing the dynamic client profile depending on the determined at least one statistical characteristic; and means for determining a usage fee based on the stored dynamic client profile. However, in Abstract, Col. 1, lines 1-67, col. 4, line 60-col. 9, line 20 thereof Slusky disclose a client profile that changes dynamically with new parameters introduced to it. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner and Castro based on the teachings of

Slusky. The motivation to combine these references is to make the output of the billing system accurately predict the amounts and costs based on interactively input data.

Further, interactive, real-time predictive systems are old and well-known in the economics industry. It would be obvious to use such a system to accurately predict estimated billed cost of the connection based on input parameters.

Claim 28: Fenner disclose comprising means for storing a statistical dynamic overall client profile, wherein the usage fee is determined from the dynamic overall client profile, and wherein the overall client profile is derived from at least one random variable of previous connections of at least one group of customers, the stored overall client profile being adapted dynamically(Abstract, i.e maintain a plurality of service profiles, col. 4, lines 40-60).

Re Claim 29: Fenner and Castro disclose the invention except wherein the at least one statistical characteristic includes at least one of connection duration, time of day, day of the week, and geographic characteristics of previous connections. However, in the Abstract, col. 1, lines 1-67, thereof, Slusky discloses dynamic profile with various parameters inserted into the profile. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner and Castro based on the teachings of Slusky. The motivation to combine these references is to make the output of the billing system accurately predict the amounts and costs based on interactively input data. Further, interactive, real-time predictive systems are old and well-known in the economics

industry. It would be obvious to use such a system to accurately predict estimated billed cost of the connection based on input parameters.

Re Claim 30: Fenner disclose the usage fee is dependent on a statistical system load obtained from the overall client profile(col. 4, lines 40-60).

Re Claim 34: Fenner disclose deriving a dynamic overall client profile, comprising the statistical features of previous connections of at least one group of customers, from at least one random variable of previous connections of said at least one group of customers; and storing said dynamic overall client profile in a memory area of a customer telecommunications device(Abstract, i.e. maintain a plurality of service profiles, col. 4, lines 40-60).

Re claims 35,36,37, 38, 44,45,46 and 47: Fenner and Castro disclose updating the client profile so that the dynamic client profile includes a value proportional to average duration price, time per connection of the customer; a number of connections of the customer in pre-defined classes of duration of customer connection time; and updating the client profile to include multi-dimensional functions of random variables of previous connections of the customer of the digital telecommunications network. However, in the Abstract, col. 1, lines 1-67, col. 4, line 60-col. 9, line 20, thereof, Slusky discloses updating a dynamic profile with various parameters inserted into the profile. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner and Castro



based on the teachings of Slusky. The motivation to combine these references is to make the output of the billing system accurately predict the amounts and costs based on interactively input data. Further, interactive, real-time predictive systems are old and well-known in the economics industry. It would be obvious to use such a system to accurately predict estimated billed cost of the connection based on input parameters.

Claim 39 and 48: Fenner and Castro disclose the invention except creation of the client traffic distribution curve includes using random variables including at least one of connection duration time, time of day, day of the week, and geographic characteristics of previous connections. However, in the Abstract, col. 1, lines 1-67, thereof, Slusky discloses dynamic profile with various parameters inserted into the profile. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner and Castro based on the teachings of Slusky. The motivation to combine these references is to make the output of the billing system accurately predict the amounts and costs based on interactively input data. Further, interactive, real-time predictive systems are old and well-known in the economics industry. It would be obvious to use such a system to accurately predict estimated billed cost of the connection based on input parameters.

Re Claim 40: Fenner disclose basing the usage fee on a statistical system load obtained from the overall client profile(col. 4, lines 40-60).

Re Claims 42 and 50: Fenner disclose informing the customer of said usage fee before establishment of the new connection; allowing the customer to interrupt the establishment of the new connection based on the informing(col. 4, lines 45-60, ie when the customer has completed the service selections, then the system tells the customer what the cost is, and that this point, the customer is not even connected so it follows that the customer is able to terminate the connection after being told of the cost).

Re Claim 51: Fenner disclose a method for determining usage fees in a telecommunications network(Abstract, col. 4, lines 50-60), comprising: requesting a new connection by the customer(col. 3, line 65-col. 4, line 60), determining a usage fee for the new connection based on the customer client profile(col. 3, line 65-col. 4, line 60); establishing the new connection(col. 4, line 60-col. 5, line 60).

Fenner disclose the invention except debiting the usage fee from a pre-paid amount before the new connection is terminated. However, in Abstract, Fig. 3, item 45, 46, 52 and 53, col. 2, lines 45-col. 4, line 25 thereof, Castro disclose(s) prepaid subscriber phone service with various memories and deducting funds from the prepaid area. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner based on the teachings of Castro. The motivation to combine these references is to make the money collection system fast and efficient and effective when used with a IC card. IC cards already have memories in them and adding the debit function enables real-time accounting of remaining funds.

Fenner and Castro disclose the invention except generating an overall client profile based on random variables associated with previous connections of a plurality of customers of the telecommunications network; generating a customer client profile for a customer of the telecommunications network based on the overall client profile; determining random variables associated with the new connection; and modifying the customer client profile based on the random variables associated with the new connection. However, in Abstract, Col. 1, lines 1-67, col. 4, line 60-col. 9, line 20 thereof Slusky disclose a client profile that changes dynamically with new parameters introduced to it. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner and Castro based on the teachings of Slusky. The motivation to combine these references is to make the output of the billing system accurately predict the amounts and costs based on interactively input data. Further, interactive, real-time predictive systems are old and well-known in the economics industry. It would be obvious to use such a system to accurately predict estimated billed cost of the connection based on input parameters.

Re Claim 59: Fenner and Castro disclose the invention except requesting a second new connection; and determining a second usage fee for the second new connection based on the modified customer client profile. However, in Abstract, Col. 1, lines 1-67, col. 4, line 60-col. 9, line 20 thereof Slusky disclose a client profile that changes dynamically with new parameters introduced to it. It would be

obvious to one of ordinary skill in the art to modify the invention of Fenner and Castro based on the teachings of Slusky. The motivation to combine these references is to make the output of the billing system accurately predict the amounts and costs based on interactively input data. Further, interactive, real-time predictive systems are old and well-known in the economics industry. It would be obvious to use such a system to accurately predict estimated billed cost of the connection based on input parameters.

Re Claim 60: Fenner and Slusky disclose the invention except comparing the usage fee with an available pre-paid amount, wherein the establishing occurs when the available pre-paid amount exceeds the usage fee. However, in the Abstract, , Fig. 3, item 45, 46, 52 and 53, col. 2, lines 45-col. 4, line 25 thereof, Castro disclose(s) prepaid subscriber phone service with various memories and deducting funds from the prepaid area. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner based on the teachings of Castro. The motivation to combine these references is to make the money collection system fast and efficient and effective when used with a IC card. IC cards already have memories in them and adding the debit function enables real-time accounting of remaining funds.

5. Claims 52,53,55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fenner(5561706A), Castro (5359642A), Slusky (5440620A), Lakshmi et

al.(6108648A) and Jain et al. (5490203A), as applied to claim 51 above, and further in view of Peterson et al.(5594940).

Re Claims 52, 53, 55, 56: Fenner, Castro and Slusky disclose the invention except the generating of the overall client profile further includes generating an overall client traffic distribution; generating of the overall client profile further includes determining, based on the overall client traffic distribution, at least one of a mean value, a variance, a class, a moving average, and a distribution in a pre-defined class; wherein the determining of the usage fee includes determining revenue figures associated with the previous connections of the plurality of customers; and wherein the determining of the revenue figures includes determining a mean time-per-connection and a mean revenue-per-connection. However, in the Abstract, claims 1-8, thereof, Peterson et al. disclose telecommunications traffic modeling system using mean and variance to determine telecommunications allocations. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner, Castro and Slusky based on the teachings of Peterson et al. The motivation to combine these references is to effectively and efficiently determine the best allocation strategy that enhances revenue.

Claims 54 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fenner(5561706A), Castro (5359642A), Slusky (5440620A), Lakshmi et al.(6108648A) and Jain et al. (5490203A), as applied to claim 51 above, and further in view of Haskin (5426645A).

Re Claims 54 and 57: Fenner, Castro and Slusky disclose the invention except the determining of the usage fee is performed by a customer telecommunications device; and storing the overall client profile and the customer client profile in a customer telecommunications device. However, in the Abstract, col. 3, lines 5-60, col. 4, lines 20-55, col. 5, lines 30-45, thereof Haskin discloses a PC which is a customer telecommunications device that stores data and dynamically changing data inputs that determine outputs such as the connection fee. It would be obvious to one of ordinary skill in the art to modify the invention of Fenner, Castro and Slusky based on the teachings of Haskin. The motivation to combine these references is to effectively and efficiently store data on the customer user device.

Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fenner(5561706A), Castro (5359642A), Slusky (5440620A), Lakshmi et al.(6108648A) and Jain et al. (5490203A), as applied to claim 51 above, and further in view of Jonsson (6115613A).

Re claim 58 Fenner, Castro and Slusky disclose the invention except storing the overall client profile and the customer client profile on an SIM card. However, in col. 1, lines 1- 67, Jonsson disclose a SIM card which has a memory for data storage that identifies a specific user of the telecommunications device. . It would be obvious to one of ordinary skill in the art to modify the invention of Fenner, Castro and Slusky based

on the teachings of Jonsson. The motivation to combine these references is to effectively and efficiently store data on the customer user device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra F. Charles whose telephone number is (571) 272 6791. The examiner can normally be reached on 9-5 Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent A. Millin can be reached on (571) 272 6747. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/508,422  
Art Unit: 3624

Page 15

Debra F. Charles  
Examiner  
Art Unit 3624

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A handwritten signature in black ink, appearing to read "Vincent Millin". The signature is fluid and cursive, with the first name "Vincent" and last name "Millin" clearly distinguishable.

VINCENT MILLIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600